PRESS RELEASE

Toyota Mobility Foundation Awards 10 Grants for Hydrogen Research Initiative

Tokyo, Japan (March 30, 2018) - The Toyota Mobility Foundation (TMF) has selected ten researchers to receive grants from the research program to support innovative hydrogen energy solutions launched last year.

The Hydrogen Research Initiative started in July 2017 to support innovative research to reduce the output of carbon dioxide and/or the cost of hydrogen and hydrogen systems. This initiative is in support of the realization of a "hydrogen society" which is a set of communities with sophisticated, integrated, green-energy networks powered by mini-hydrogen plants that aim to create a carbon-free, hydrogen distribution system. Research proposals were requested to yield practical results in these areas between the years 2025 and 2030. This fiscal year, we solicited applications in four fields:

- Hydrogen generation
- Hydrogen storage and transport
- Hydrogen applications
- Energy systems

We received 32 applications, and a screening panel of hydrogen energy experts from universities and public research organizations determined the final grant awardees. Here are the 10 recipients.

2017 Grant Recipient Research Topics

Research Field	Research Topics	Researcher	Institution
Hydrogen generation	Dynamic Simulation of Hydrogen Production System Using Estimated Renewable Electricity Profiles and a Water Electrolyzer Model	KOJIMA, Hirokazu	National Institute of Advanced Industrial Science and Technology
	Investigation of catalyst/electrolyte interface structure during photoelectrochemical water splitting	SATO, Masahiro	The University of Tokyo
	Innovative surface reforming technology development for functionalization of stainless steels as water electrolysis catalysts	TODOROKI, Naoto	Tohoku University
	Development of air electrodes for proton-conducting solid oxide electrochemical cells	MATSUI, Tosihaki	Kyoto University
	Development of oxide-based electrocatalyst of water electrolysis for production of CO2-free-hydrogen.	MATSUZAWA, Koichi	Yokohama National University
Hydrogen storage and transport	Computational Design for Higher-Order Porous Structures Suitable for Efficient Hydrogen Storage under Room Temperature-Molecular Dynamics Approach-	Kim, Hyeon-Deuk	Kyoto University
	Development of organic hydride electrolyzer for hydrogen energy carrier synthesis	NAGASAWA, Kensaku	Yokohama National University
Hydrogen	Examination of alternative measure	ASAHARA,	Gifu University

applications	for safety distance in high pressure hydrogen storage facility using porous wall	Makoto	
Energy systems	Design of sustainable hydrogen supply system based on the spatial analysis	FURUBAYASHI, Takaaki	Tohoku University
	Study for realization of hybrid energy system composed of electric and hydrogen energy using renewable energy and FCV	YOSHIOKA, Tsuyoshi	The University of Tokyo

Kazunari Sasaki, Vice President of Kyushu University and chair of the screening panel, commented, "The grant research topics from this year will lead to significant technological innovations toward the full-scale commercialization of hydrogen. The screening panel will continue to support the researchers through ongoing advising, thanks to the support of TMF. I hope that the researchers expand their perspectives through opportunities for exchanging ideas with the members of screening panel and other grant recipients. Furthermore, I hope that they become leaders who contribute to the realization of the 'hydrogen society' by 2050."

TMF Chairman Akio Toyoda, concurrently president of Toyota Motor Corporation, stated, "Securing environmentally-friendly, sustainable energy is an important issue in mobility. Carbon-free hydrogen combined with renewable energy is a leading option for energy in the future. We recognize that we need a lot of technological innovation to develop the 'hydrogen society' which is why TMF launched a research program to support it. I would like to express my sincere gratitude for the great support of many people, including Professor Sasaki and the screening panel.
TMF will contribute to both the hydrogen society and an ever-better society by supporting these next-generation researchers who are developing technological innovations through the help of the screening panel and the TMF grant funding over the next 5 years."

About the Toyota Mobility Foundation

The Toyota Mobility Foundation was established in August 2014 to support the development of a more mobile society. The Foundation aims to support strong mobility systems while eliminating disparities in mobility and has been working on issues in the mobility around the world by diversifying the modes of transportation in Thailand, Vietnam, India and Brazil, subsidizing projects to resolve mobility issues in the mountainous regions in Japan, host the Mobility Challenge to support the development of assistive devices for people with disabilities. It utilizes Toyota's expertise in technology, safety, and the environment, working in partnership with universities, government, non-profit organizations, research institutions and other organizations to address mobility issues around the world. Programs include resolving urban transportation problems, expanding the utilization of personal mobility, settling energy issues, and developing solutions for next generation mobility.

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